

REMARKS

The present application was filed on January 2, 2002 with claims 1 through 33. Claims 1 through 33 are presently pending in the above-identified patent application.

5 In the Office Action, the Examiner rejected claims 1-14, 19-22, and 31 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Examiner also rejected claims 1, 2, 4, 19, 20, 22, and 31 under 35 U.S.C. §102(e) as being anticipated by Garudadri et al. (United States Patent Number 6,671,669), rejected claims 11-18, 23-30, and 32-33 under 35 U.S.C. §102(e) as being
10 anticipated by Murveit et al. (United States Patent Number 6,766,295), rejected claims 5-7 under 35 U.S.C. §103(a) as being unpatentable over Garudadri et al. in view of Baker (United States Patent Number 6,122,613), rejected claims 3, 10, and 21 under 35 U.S.C. §103(a) as being unpatentable over Garudadri et al. in view of Murveit et al., and rejected claim 8 under 35 U.S.C. §103(a) as being unpatentable over Garudadri et al. in view of
15 Chao Chang et al. (United States Patent Number 6,567,778). The Examiner also indicated that claim 9 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. Applicants note that the Examiner referred to Murveit et al. as having United States Patent Number 6,671,669; Applicants assume the Examiner meant to refer to United States Patent Number
20 6,766,295.

Section 112 Rejections

Claims 1-14, 19-22, and 31 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. In particular, the Examiner asserts that neither FIG. 3 nor the specification suggest/indicate that each of the
25 plurality of the speech recognizers in FIG. 3 use a speaker model corresponding to a different one of the speakers, and that the “newly added feature regarding user speaker model corresponding to a different one of said speakers is not supported by the specification.”

Applicants note that the present specification teaches that “each automatic
30 speech recognition system 106 is loaded with a speaker model corresponding to a particular known speaker.” (Page 4, line 25-27, of the originally filed specification.) The

automatic speech recognition systems 106 are utilized to perform the speech recognition in FIG. 3. Thus, contrary to the Examiner's assertion, FIG. 3 and the specification suggest/indicate that each of the plurality of the speech recognizers in FIG. 3 use a speaker model corresponding to a different one of the speakers. Applicants therefore respectfully request that the section 112 rejections be withdrawn.

Independent Claims 1, 19 and 31

Independent claims 1, 19, and 31 were rejected under 35 U.S.C. §102(e) as being anticipated by Garudadri et al. Regarding claim 1, the Examiner asserts that Garudadri discloses providing said speech to a plurality of speech decoders, each of said decoders using a speaker model for one of said speakers and generating a confidence score for each decoded output (FIG. 1 or referring to col. 8, lines 33-67). In the Response to Amendment, the Examiner further asserts that neither FIG. 3 nor the specification suggest/indicate that each of the plurality of the speech recognizers in FIG. 3 use a speaker model corresponding to a different one of the speakers, and that the newly added feature regarding user speaker model corresponding to a different one of said speakers is not supported by the specification.

Applicants note that Garudadri is directed to providing speech to a plurality of speech engines in a system to get better recognition accuracy (see, Abstract). Garudadri does not disclose or suggest, however, a plurality of speakers wherein each speech engine *corresponds to a different one* of the speakers. As noted above, the present specification teaches that "each automatic speech recognition system 106 is loaded with a speaker model corresponding to a particular known speaker." (Page 4, line 25-27, of the originally filed specification.) The automatic speech recognition systems 106 are utilized to perform the speech recognition in FIG. 3. Thus, contrary to the Examiner's assertion, FIG. 3 and the specification suggest/indicate that each of the plurality of the speech recognizers in FIG. 3 use a speaker model corresponding to a different one of the speakers. Independent claim 1, 19, and 31 require providing said speech to a plurality of speech decoders, each of said decoders using a speaker model corresponding to a different one of said speakers.

Applicants also note that, in the text cited by the Examiner, Garudadri teaches that

the decision logic 188, 190, 192 selects from the respective template database 112, 114, 116 the template that most closely matches the vectors. In the alternative, the decision logic 188, 190, 192 may use a conventional "N-best" selection algorithm, which chooses the N closest matches within a predefined matching threshold. *The user is then queried as to which choice was intended.* The output of the decision logic 188, 190, 192 is the decision as to which word in the vocabulary was spoken. (Col. 8, line 61, to col. 9, line 2; emphasis added.)

Garudadri therefore teaches that the *user is queried as to which choice was intended*. Independent claims 1, 19, and 31 require selecting a decoded output *based on said confidence score*.

Thus, Garudadri et al. do not disclose or suggest providing said speech to a plurality of speech decoders, each of said decoders using a speaker model corresponding to a different one of said speakers and generating a confidence score for each decoded output, and selecting a decoded output based on said confidence score, as required by independent claims 1, 19, and 31.

Independent Claims 11, 15, 23, 27 and 32-33

Independent claims 11, 15, 23, 27, and 32-33 were rejected under 35 U.S.C. §102(e) as being anticipated by Murveit et al. Regarding claim 11, the Examiner asserts that Murveit discloses providing said speech to a speaker independent speech recognition system and a speaker specific speech recognition system (FIGS. 3-5 or col. 4, line 1, to col. 5, line 67); and decoding said speech using said speaker independent speech recognition system whenever the identity of the current speaker is unknown (elements 206, 208, and 210 in FIG. 3). In Point 2 of the Response to Amendment, the Examiner further asserts that "Murveit et al. (US 6671669)" fully anticipates all the claim limitations and that a decision logic (FIG. 1: element 124) determines the best recognition result from the three recognition results.

Applicants note that the Examiner has rejected claim 11 based on Murveit, but has cited the United States Patent Number and figures of Garudadri in the Response to Amendment. Regarding Murveit, Applicants note that Murveit teaches to utilize a speaker independent model or a speaker dependent model (see, FIG. 3, blocks 206, 208, 216 and FIG. 5, blocks 206, 208, 216). Independent claims 11, 15, 23, 27, and 32-33, as amended, require providing said speech to a speaker independent and a speaker specific

speech recognition system *substantially simultaneously*. Thus, Murveit actually *teaches away* from the present invention by teaching to provide the speech to *only one* of the speaker models. A person of ordinary skill in the art would therefore *not* look to combine Murveit and Garudadri.

5 Regarding Garudadri, Applicants note that the Examiner asserts (in the rejection of claim 1) that Garudadri, for example, teaches *selecting a decoded output based on said confidence score*. Independent claim 11 requires decoding said speech using said speaker independent speech recognition system *whenever the identity of the current speaker is unknown*. Garudadri does not disclose or suggest decoding said
10 speech using said speaker independent speech recognition system *whenever the identity of the current speaker is unknown*, and does not disclose or suggest decoding said speech using said speaker specific speech recognition system with a speaker model for an identified speaker *until there is a speaker change*. Applicants also note that Garudadri teaches to combine the results of a plurality of speech engines (see, Abstract), and thus
15 does not disclose or suggest selecting one speech engine.

 In summary, Applicants note that the Examiner did not reject the cited claims under section 103. Nonetheless, Murveit et al. and Garudadri et al., alone or in combination, do not disclose or suggest providing said speech to a speaker independent speech recognition system and a speaker specific speech recognition system substantially
20 simultaneously and decoding said speech using said speaker independent speech recognition system whenever the identity of the current speaker is unknown, as required by independent claims 11, 23, and 32, and do not disclose or suggest providing said speech to a speaker independent speech recognition system and a speaker specific speech recognition system substantially simultaneously; and decoding said speech using said
25 speaker specific speech recognition system with a speaker model for an identified speaker until there is a speaker change, as required by independent claims 15, 27, and 33.

Additional Cited References

 Baker was also cited by the Examiner for its disclosure of the step of manually selecting an alternate decoded output if said assigned output is incorrect.
30 Applicants note that Baker is directed to

recognizing a speech sample with a “computer system by processing the speech sample with at least two speech recognizers, each of which has a different performance characteristic. One speech recognizer may be a large-vocabulary, continuous speech recognizer optimized for real-time responsiveness and another speech recognizer may be an offline recognizer optimized for high accuracy.”
(See, Abstract.)

Baker does not disclose or suggest decoding said speech using said speaker independent speech recognition system whenever the identity of the current speaker is unknown, and does not disclose or suggest decoding said speech using said speaker specific speech recognition system with a speaker model for an identified speaker until there is a speaker change.

Thus, Baker does not disclose or suggest providing said speech to a plurality of speech decoders, each of said decoders using a speaker model corresponding to a different one of said speakers and generating a confidence score for each decoded output, as required by independent claims 1, 19, and 31, does not disclose or suggest providing said speech to a speaker independent speech recognition system and a speaker specific speech recognition system substantially simultaneously and decoding said speech using said speaker independent speech recognition system whenever the identity of the current speaker is unknown, as required by independent claims 11, 23, and 32, and does not disclose or suggest providing said speech to a speaker independent speech recognition system and a speaker specific speech recognition system substantially simultaneously; and decoding said speech using said speaker specific speech recognition system with a speaker model for an identified speaker until there is a speaker change, as required by independent claims 15, 27, and 33.

Chao Chang et al. were also cited by the Examiner for its disclosure of the step of presenting said decoded output as a string of words if said corresponding confidence score is below a certain threshold. Applicants note that Chao Chang et al. is directed to a “method and apparatus for processing and interpreting natural language which enhances the operation through the use of semantic confidence values to enhance efficiency” (col. 1, lines 24-26.) Chao Chang et al. do not disclose or suggest decoding said speech using said speaker independent speech recognition system whenever the identity of the current speaker is unknown, and do not disclose or suggest decoding said

speech using said speaker specific speech recognition system with a speaker model for an identified speaker until there is a speaker change.

Thus, Chao Chang et al. do not disclose or suggest providing said speech to a plurality of speech decoders, each of said decoders using a speaker model
 5 corresponding to a different one of said speakers and generating a confidence score for each decoded output, as required by independent claims 1, 19, and 31, do not disclose or suggest providing said speech to a speaker independent speech recognition system and a speaker specific speech recognition system substantially simultaneously and decoding
 10 said speech using said speaker independent speech recognition system whenever the identity of the current speaker is unknown, as required by independent claims 11, 23, and 32, and do not disclose or suggest providing said speech to a speaker independent speech recognition system and a speaker specific speech recognition system substantially simultaneously; and decoding said speech using said speaker specific speech recognition system with a speaker model for an identified speaker until there is a speaker change, as
 15 required by independent claims 15, 27, and 33.

Dependent Claims 2-10, 12-14, 16-18, 20-22, 24-26, and 28-30

Dependent 2, 4, 20, and 22 were rejected under 35 U.S.C. §102(e) as being anticipated by Garudadri et al., claims 12-14, 16-18, 24-26, and 28-30 were rejected under 35 U.S.C. §102(e) as being anticipated by Murveit et al., claims 5-7 were
 20 rejected under 35 U.S.C. §103(a) as being unpatentable over Garudadri et al. in view of Baker, claims 3, 10, and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Garudadri et al. in view of Murveit et al., and claim 8 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garudadri et al. in view of Chao Chang et al.

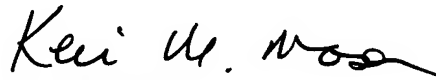
Claims 2-10, 12-14, 16-18, 20-22, 24-26, and 28-30 are dependent on
 25 claims 1, 11, 15, 19, 23, and 27, respectively, and are therefore patentably distinguished over Garudadri et al., Murveit et al., Baker, and Chao Chang et al. (alone or in any combination) because of their dependency from amended independent claims 1, 11, 15, 19, 23, and 27 for the reasons set forth above, as well as other elements these claims add in combination to their base claim. The Examiner has already indicated that claim 9
 30 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

All of the pending claims, i.e., claims 1-33, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to
5 contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,



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